CLAIMS:

1. A control method for a synchronous communication network that includes a hub and a plurality of user nodes each at a different distance from the hub, said method comprising steps of:

creating a burst time plan that allocates a number of slots and a location of each slot in a frame time period to each user node;

transmitting a frame from the hub to each user node, the frame including the burst time plan; and

transmitting a respective data burst in the frame time period from each user node to the hub according to the burst time plan, a start of the frame time period from each user node occurring at the hub simultaneously, wherein

each data burst includes user data segments in a position of at least one slot in the frame time period allocated to the respective user nodes according to the burst time plan, and

the position of each slot in the frame time period allocated to the respective user node is equally spaced along a time axis.

2. The method of claim 1, wherein the step of transmitting a respective data burst in a frame time period is performed using a plurality of channels.

3. The method of claim 2, wherein the step of creating a burst time plan further comprises the steps of:

calculating a number of slots in a virtual frame time period, said number of slots being a sum of a number of slots in each channel in the frame time period;

selecting a position of each slot in the virtual frame time period allocated to the respective user node, said position of each slot in the virtual frame time period

allocated to the respective user node being equally spaced throughout the number of slots; and

dividing the virtual frame time period into a number of frame time periods, wherein said number of frame time periods is equal to a number of the plurality of channels.

4. The method of claim 3, wherein the step of dividing the virtual frame time period further comprises the step of:

moving at least one slot assignment from a first frame time period to a second frame time period to reduce a number of different frame time periods in which the slots of the respective user node are allocated.

5. A synchronous communication system comprising:

a hub;

a transponder configured to be hosted on a satellite; and

a plurality of user nodes that communicate with the hub via the transponder, said hub being configured to

create a burst time plan that allocates a number of slots and a location of each slot in a frame time period to each user node,

transmit a frame from the hub to each user node, the frame including the burst time plan, and said plurality of user nodes being configured to

transmit a respective data burst in the frame time period from each user node to the hub according to the burst time plan, a start of the frame time period from each user node occurring at the hub simultaneously, wherein

each data burst includes user data segments in a position of at least one slot in the frame time period allocated to the respective user node according to the burst time plan, and

the position of each slot in the frame time period allocated to the respective user node is equally spaced along a time axis.

6. The system of claim 5, wherein the hub is further configured to transmit a respective data burst in a frame time period using a plurality of channels.

7. The system of claim 6, wherein the hub is further configured to

calculate a number of slots in a virtual frame time period, said number of slots being a sum of a number of slots in each channel in the frame time period,

select a position of each slot in the virtual frame time period allocated to the respective user node, said position of each slot in the virtual frame time period allocated to the respective user node configured to be equally spaced throughout the number of slots, and

divide the virtual frame time period into a number of frame time periods,

wherein said number of frame time periods is configured to be equal to a number of the plurality of channels.

8. The system of claim 7, wherein the hub is further configured to move at least one slot assignment from a first frame time period to a second frame time period to reduce a number of different frame time periods in which the slots of the respective user node are allocated.

9. A synchronous communication system, comprising:

a hub;

a transponder configured to be hosted on a satellite; and

a plurality of user nodes that communicate with the hub via the transponder, said hub comprising

means for creating a burst time plan that allocates a number of slots and a location of each slot in a frame time period to each user node,

means for transmitting a frame from the hub to each user node, the frame including the burst time plan, and said plurality of user nodes comprising

means for transmitting a respective data burst in the frame time period from each user node to the hub according to the burst time plan, a start of the frame time period from each user node occurring at the hub simultaneously, wherein

each data burst includes user data segments in a position of at least one slot in the frame time period allocated to the respective user node according to the burst time plan, and

the position of each slot in the frame time period allocated to the respective user node is equally spaced along a time axis.